

CLAIMS

What is claimed is:

1. A simulation system for evaluating an application, comprising:
 - a description file for describing a host protocol specification defining an environment in which the application is operated, the description file containing a project object corresponding to the host protocol specification;
 - the project object describing a message structure that is compatible with the host protocol specification; and
 - a host simulator coupled to the description file, being adaptable in response to accessing the project object, for communicating a message with the application, the host simulator describing the message by a dual representation technique in which a first representation of the message provides a flattened version of the message, and a second representation of the message provides a hierarchical version of the message
2. The simulation system of Claim 1 wherein the host simulator further includes a communication framework for supporting at least one communication protocol.
3. The simulation system of Claim 2 wherein the at least one communication protocol is selected from the group of TCP/IP, Named Pipes, and X.25.

4. The simulation system of Claim 1 wherein a hierarchical markup language is used in the description file for message definition and description.

5. The simulation system of Claim 4 wherein the hierarchical markup language is XML.

6. The simulation system of Claim 1 wherein the first representation of the message is used for data evaluation; and
wherein the second representation of the message is used for display.

7. The simulation system of Claim 2 wherein the host simulator further includes a message parser for constructing and analyzing the message.

8. The simulation system of Claim 2 wherein the project object includes a message format for describing message field characteristics associated with the message structure.

9. The simulation system of Claim 8 wherein the message field characteristics are selected from the group of name, size, position, and default value.

10. The simulation system of Claim 8 wherein the project object further includes a group format for storing selected message fields in a group.

11. The simulation system of Claim 2 wherein the project object further includes a command sequence list.

12. The simulation system of Claim 2 wherein the project object further includes a message list.

13. The simulation system of Claim 2 wherein the host simulator further includes a message list and a command sequence list.

14. The simulation system of Claim 2 wherein the host simulator further includes a message parser for parsing the message.

15. The simulation system of Claim 2 wherein the host simulator further includes a language translator coupled between the message parser and GUI for translating XML to HTML.

16. A simulation system for evaluating an application, comprising:
a description file for describing a host protocol specification defining an environment in which the application is operated, the description file containing a project object corresponding to the host protocol specification;

the project object describing a message structure that is compatible with the host protocol specification;

a host simulator coupled to the description file, being adaptable in response to accessing the project object, for communicating messages with the application, the host simulator including a message parser for constructing and analyzing the messages, the message parser employing a dual representation technique of the messages such that a first representation of a message provides a packed version of the message, and a second representation of the message provides a user oriented view of the message for display; and

a communication framework for supporting at least one communication protocol.

17. The simulation system of Claim 16 wherein the at least one communication protocol is selected from the group of TCP/IP, Named Pipes, and X.25.

18. The simulation system of Claim 16 wherein the project object includes a message format for describing message field characteristics associated with the message structure.

19. The simulation system of Claim 16 wherein the message structure is comprised of at least two fields having group formats and field formats, at least a one of the fields being usable to define both an event and a message output.

20. The simulation system of Claim 16 further including a command sequence list having at least one command sequence.

21. The simulation system of Claim 20 wherein the host simulator is activable, in response to receiving a predetermined input, to execute a predetermined command sequence.

22. The simulation system of Claim 21 wherein the predetermined input is selected from the group of a predetermined message and a user request.

23. The simulation system of Claim 21 wherein another simulator is adapted to simulate the application, such that the other simulator communicates with the host simulator; and

the other simulator is coupled to the description file for accessing the project object corresponding to the host protocol specification.

24. A simulation system for evaluating an application, comprising:
a description file for describing a host protocol specification defining an environment in which the application is operated, the description file containing a project object corresponding to the host protocol specification;

the project object describing a message structure that is compatible with the host protocol specification, the message structure being described by a message format and a group format, the project object including;

a message list including a plurality of selectable pre-constructed messages; and

a command sequence list including at least one command sequence defining a predetermined set of actions, the predetermined set of actions including sending a selectable pre-constructed message;

a host simulator coupled to the description file, being adaptable in response to accessing the project object, for communicating messages with the application, the messages complying with the message structure of the host protocol specification, the host simulator including a message parser for analyzing and constructing the messages, the message parser being operable to send a command sequence in response to receiving a predetermined message; and

a communication framework for supporting at least one communication protocol.